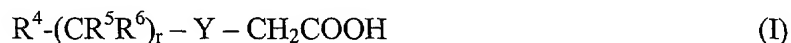


ABSTRACT

The present invention relates to IR-sensitive compositions suitable for the manufacture of printing plates developable on-press. The IR-sensitive compositions comprise:

- (a) a first polymeric binder which does not comprise acidic groups having a pKa value less than or equal to 8;
- (b) a second polymeric binder comprising polyether groups
- (c) an initiator system comprising
  - (i) at least one compound capable of absorbing IR radiation selected from triarylamine dyes, thiazolium dyes, indolium dyes, oxazolium dyes, cyanine dyes, polyaniline dyes, polypyrrole dyes, polythiophene dyes and phthalocyanine pigments;
  - (ii) at least one compound capable of producing radicals selected from polyhaloalkyl-substituted compounds; and
  - (iii) at least one polycarboxylic acid represented by the following formula I



wherein Y is selected from the group consisting of O, S and  $NR^7$ ,  
each of  $R^4$ ,  $R^5$  and  $R^6$  is independently selected from the group consisting of hydrogen,  $C_1$ - $C_4$  alkyl, substituted or unsubstituted aryl,  $-COOH$  and  $NR^8CH_2COOH$ ,  
 $R^7$  is selected from the group consisting of hydrogen,  $C_1$ - $C_6$  alkyl,

$-\text{CH}_2\text{CH}_2\text{OH}$ , and  $\text{C}_1\text{-C}_5$  alkyl substituted with  $-\text{COOH}$ ,

$\text{R}^8$  is selected from the group consisting of  $-\text{CH}_2\text{COOH}$ ,  $-\text{CH}_2\text{OH}$  and  $-(\text{CH}_2)_2\text{N}(\text{CH}_2\text{COOH})_2$  and  $r$  is 0, 1, 2 or 3, with the proviso that at least one of  $\text{R}^4$ ,  $\text{R}^5$ ,  $\text{R}^6$ ,  $\text{R}^7$  and  $\text{R}^8$  comprises a  $-\text{COOH}$  group or salts thereof;  
and

(d) a free radical polymerizable system comprising at least one member selected from unsaturated free radical polymerizable monomers, oligomers which are free radical polymerizable and polymers containing  $\text{C}=\text{C}$  bonds in the back bone and/or in the side chain groups,

wherein the following inequality is met:

$$\text{ox}_i < \text{red}_{ii} + 1.6 \text{ eV}$$

with  $\text{ox}_i$  = oxidation potential of component (i) in eV

$\text{red}_{ii}$  = reduction potential of component (ii) in eV.